13 Feb 2014

Specification for 5 inch Portable Ventilation Blower:

The blower shall be a New York Blower, Model NYB-125-2 with TEFC Motor, as described below. Technical Point of Contact: Puget Sound Naval Shipyard and Intermediate Maintenance Facility, Code 260.41 Temporary Services Engineering, Robert Kellogg, phone 360-476-9595.

The blower will be used in a shipyard, in a non-hazardous environment. During use and storage, the fan will be exposed to weather and light salt spray. The application is temporary ventilation systems, exhausting weld smoke or flammable paint fumes/aerosols, supplying fresh air, or providing general ventilation. The fan will be moved frequently and placed on irregular surfaces. Rugged construction and light weight are important design requirements.

1. Performance: 600 CFM at 8 inch water gage minimum static pressure.
2. Assembled weight under 63 lb.
3. Spark Resistant in accordance with AMCA Std 99-0401, Type A, (aluminum housing and wheel).
4. Inlet and outlet size 5 inch ID, (+1 1/16", -0").
5. Watertight conduit and fittings. Weather cap on top of conduit entrance of manual starter box.
6. Cast or fabricated aluminum casing and impeller. The aluminum alloy shall be appropriate for use in a marine atmosphere with no protective coating.
7. All components shall be rated for washdown by a water hose and operation in the weather.
8. The impeller housing, motor, and controller shall be mounted to a compact, corrosion-resistant frame with an integral base and carrying handle.
9. Motors:
    a. Shall be TEFC 460V, 3 phase, 1.15 or 1.25 service factor, rated for continuous operation.
    b. Installed with junction box located on top.
    c. Motor cooling fan cover shall be retained in place on the motor by threaded fasteners.
    d. Sealed or relubricable roller element bearings. If relubricable bearings are used, the bearings shall be lubricated via Alemite fittings accessible without disassembly of the fan.
10. Inlet and outlet screen wire shall be stainless steel, greater than 0.064 inch diameter, with ¼" or larger openings.
11. Manual (non-magnetic) starter Square-D 2510 MBW2 M-0 (or equal), with overloads, in a NEMA 4X enclosure.
12. Where fasteners are threaded into aluminum, an anti-galling compound shall be applied to each bolt.
13. An anti-galling compound shall be applied to the motor shaft and wheel (aluminum fan impeller) bore prior to assembly. This is to prevent past problems with impeller seizing after service.
14. Fasteners with any portion visible from outside of the fan shall be stainless steel and shall be installed with at least one but not more than five threads projecting through the nut threads.
15. The impeller shall be statically and dynamically balanced. Balance adjustments shall be made by metal removal.
    a. Metal shall not be removed from the blades of the impeller.
    b. Weights or fasteners shall **not** be added for the purpose of adjusting impeller balance.
16. The fan shall produce 84 dBA at 4 feet, or less, when operated at the design point with uninsulated flexible fabric hose connected to the inlet and outlet.
17. The fan shall be fully wired, assembled, tested, and ready to use upon receipt. Customer will install power cable connecting the starter to line power.
18. If the fans, as delivered, do not meet the specification requirements, the government may reject the shipment.
19. The fan motor shall not exceed 110% of the motor nameplate full load amperage when operated with an external static resistance of 5 inches water gage. If a 1.25 service factor motor is used, the fan motor shall not exceed 120% of the motor nameplate full load amperage when operated with an external static resistance of 5 inches water gage.
20. Documentation: The fans shall be delivered with three hard copies of the documentation, which shall include:
    a. Operation and service instructions. The service instructions shall be updated to add impeller blade removal steps and identification of the correct blade pulling tool.

b. Parts list and assembly drawing, each including major assemblies and also small, minor components.
c. Assembly drawing showing equipment dimensions with all parts installed.
d. Certified fan performance curve and octave band noise data
e. Electrical schematic
f. Label plates and serial numbers
g. 29 CFR 1910.303 Certification
h. Warranty
i. Weight Certification
j. No-PCB Certification
k. Surface preparation, primer, and topcoat data. Catalog cutsheets or data sheets for the coatings shall be included. Where different coatings are used on the impeller, fan casing, and other components, the surface preparation and coatings used on each surface shall be identified. Surface preparation shall be stated in terms of SSPC-SP level and shall demonstrate conformance with the paint manufacturer's requirements as shown on the cutsheets or data sheets.

21. Label: The fan casing or a separate, engraved, metal label plate shall include the following information:
    a. Fan rotation arrow, size at least 4" long and ½" wide.
    b. "Spark Resistant in accordance with AMCA Std 99-0401, Type A"
    c. Vendor name, address, phone
    d. Model number
    e. Motor grease brand and model (if relubricable bearings are used)
22. Testing by vendor prior to shipment: Each fan, when complete and mounted on the portable frame with starter, shall be connected to power, started, and operated for at least one hour to verify proper operation.
23. **NRTL Approved** - The equipment specified herein shall be in compliance with the applicable OSHA regulations and be listed by one of the OSHA accredited laboratories or approved in accordance with CFR Title 29, Chapter XVII, Part 1910 and installed in accordance with applicable NEC/NFPA requirements. Approval shall be as specified under the "Approval" and "Acceptance" criteria in the OSHA regulations Subpart "O", Machinery and Machine Guarding para. 1910.212 and Subpart "S" Electrical, para. 1910.303 and para. 1910.399.